

Date: 7 December 1994

Subject: Part-Time Farmer is Killed in ROPS-Equipped Tractor Rollover

SUMMARY

A 60-year-old male minister and part-time farmer began mowing a 15-acre field near his home at about 11:00 am. Operating a farm tractor with a side sickle bar mower attached to the right side, he proceeded around the perimeter of the field. One edge of the field dropped off steeply to a ravine. While making the second pass around the field the ground under the left wheels gave way causing the tractor to roll over. The tractor came to rest on the victim causing massive internal injuries. A Roll Over Protective Structure (ROPS) had been retro-fitted to the 1962 tractor about ten years prior to the incident. The tractor did not have a seat belt. The FACE investigator concluded that to prevent future similar occurrences, tractor operators should:

- Equip ROPS-equipped tractors with seat belts. Operators should wear seat belts when operating ROPS equipped tractors.

INTRODUCTION

On 8 August 1994, a 60-year-old Christian Church minister, who farmed a 100-acre homestead in a rural Kentucky county, was fatally injured when the tractor he was operating rolled over onto him. On 30 September 1994, the Kentucky FACE investigator was notified of the fatality by a representative of the Kentucky Agricultural Extension Service at the University of Kentucky. On 20 October 1994, the FACE investigator traveled to the scene to conduct an investigation. The county coroner and the Emergency Medical Service (EMS) were interviewed. The scene and tractor were photographed. The deputy sheriff who lives next door to the victim and responded to the scene was interviewed on 25 October 1994.

The victim in this incident had lived and worked on the farm for about ten years. During that time he raised 30 head of cattle, hay and some tobacco. Prior to that time he had only done minor farm activities. He had owned and operated the tractor for about ten years. The 1962 Ford 2000 gasoline powered tractor had been retro-fitted with a ROPS. The victim had done a similar procedure many times prior to the day of the incident.

INVESTIGATION

The victim began mowing a fifteen-acre field at about 11:00 am on the day of the incident. Weather conditions were warm and sunny, in the upper 70's. After completing the safety cut (where a reverse pass, counterclockwise rotation is made around the perimeter of the field in order to see where the tractor is going on subsequent passes), the victim began cutting in a clockwise direction. At approximately 11:05 he was seen by a neighbor making the first pass around the field. The neighbor, plowing his own field on another tractor, waved to the victim. At about 11:30 the neighbor returned to the area and noticed the victim had not mowed as much as would be expected. He drove his tractor along the mowed path to investigate. He came upon the

victim under the tractor in the ravine and immediately went for help. 911 received the call at 11:29 and arrived at the scene at 11:45. Noting no pulse or respiration, the coroner was called. A wrecker was used to lift the tractor off the victim. The victim suffered multiple internal injuries in the incident. Death occurred within minutes.

Evidence at the scene suggests the tractor's left front wheel slid down the 12 foot bank as the ground gave way. The victim attempted to turn to the right but the momentum caused the tractor to roll over to the left throwing off the victim. It rolled three quarters of a turn to the left and came to rest on the victim. The PTO was engaged and the engine had quit.

The ROPS and its installation complied with OSHA 1928.52 and SAE J1194. The tractor was in very good shape for its age. Its brakes and fluid filled rear tires were in good condition. Lights were mounted on the ROPS. Wheel base measured 72" with both front and rear wheels spread equidistant to 54 inches. No front end weights were mounted on the brush guard. The hour meter read 3252.5. The ROPS was made by Ford New Holland, Inc. in Troy, Michigan. The sickle bar was completely destroyed.

CAUSE OF DEATH

The coroner pronounced the death at 12:45 pm and ruled the cause of death as multiple internal injuries. An autopsy was not performed.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Owners and operators should not operate ROPS-equipped tractors without a seat belt.

Discussion #1: Protection offered by ROPS in a rollover is negated when a seat belt is not used. The momentum of the turnover does not allow operators time to jump clear. Therefore a seat belt to keep the operator on the overturned tractor would prevent fatal injuries in this case. "Safety restraints, such as seat belts, should be used in conjunction with the ROPS to keep the operator within the space protected by the device" (NIOSH UPDATE January 29, 1993). The warning label on this tractor's rollover bar stated, "Always wear seat belt with ROPS."

REFERENCES

Effectiveness of Roll Over Protective Structures for Preventing Injuries Associated with Agricultural Tractors. MMWR 42(03); 57-59.

National Safety Council (1978). "Tractor Operation and Roll-Over Protective Structures." Occupational Safety & Health Data Sheets. I-622-Reaf. 85.

National Institute for Occupational Safety and Health (Jan 29, 1993). "NIOSH Reports on the Preventability of Tractor Rollovers." Centers for Disease Control and Prevention. DHHS (NIOSH) publication No. 93-119.

